



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RBE117-41601W1-9

Job Sheet 172218



Part No: RBE117-41601W1-9

Job Qty: 8 ea

Part Name: Alignment Tip



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 2/14/18

Job Tracking No:

Due Date: 2/28/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG RBE117-41601W1-9 REV:1 IPP REV A 18.02.08 NEW ISSUE RQ VERIFIED BY DP

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	8 Ea		2/27/18	0.00	0.00	Start Up Machining-4		SL 18-4-3
100	CNC Lathe	8 pcs		2/28/18	0.00	0.40	MORI SL-154		SL
110	QC	8 pcs		2/28/18	0.00	0.00	QC2 Machining-5		SL
130	QC	8 pcs		2/28/18	0.00	0.00	QC8 Machining-5		SL 18/04/18
200	Outsource	8 pcs		2/28/18	0.00	0.00	Outsource13		
210	Packaging	8 pcs		2/28/18	0.00	0.00	Packaging2		
220	QC	8 pcs		2/28/18	0.00	0.00	QC6		
230	Packaging	8 pcs		2/28/18	0.00	0.00	Packaging3-2		SD
240	QC21-SA	8 Ea		2/28/18	0.00	0.00	QC21		SD

Part Op 100 - 1-Machine as per folio FB 983 FOLIO REV: _____ DWG REV: _____ 2-Debur 21

Descriptions: 200 - -Issue P/O to Groupe Altech: P/O _____ -Zinc plate, ASTM B633 TYPE 1 SC2 -Certificate of Conformity is required

210 - Receive

230 - IDENTIFY AND STOCK

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
MT-4140QT-R0.500	AISI 4140 Quenched & Tempered Steel Round Bar 0.500" Dia.	.3280 ft (.041 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	MT-4140QT-R0.500 M17-M-H900-R0.500	0	12	0

Part Specifications

Specifications could not be found



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S057574



Part: RBE117-41601W1-9

Job No: 172218

Serial No/Batch: S057574

Revision: 1

Inspector:

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. <u>RBE117-41601W1-7/-9</u> NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
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Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval March 09, 2018																		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																	
RBE117-41601W1-7/-9 can be manufactured from 17-4PH-H900 as an alternative material. Heat treat and Zinc plating is not required if the part is manufactured from 17-4PH-H900.				- This deviation is acceptable. - The fit, form and function of the part will be as originally intended.																					
Root Cause				FAULT CATEGORY																					
Environment	☐			No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong													
Design	☒			Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions													
Doc/Data	☐			Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance													
Equip/Tooling	☐			Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect													
Handling/Pre	☐			Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing													
Material	☒			Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved													
Internal Transport	☐			Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing													
Tribal Knowledge	☐			Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish													
LOA	☐			Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread													
Substation	☐			Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence													
Past Expiry Date	☐			Manufacturing Process	☐	OTHER :																			
Misidentified	☐			Past Due	☐																				

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

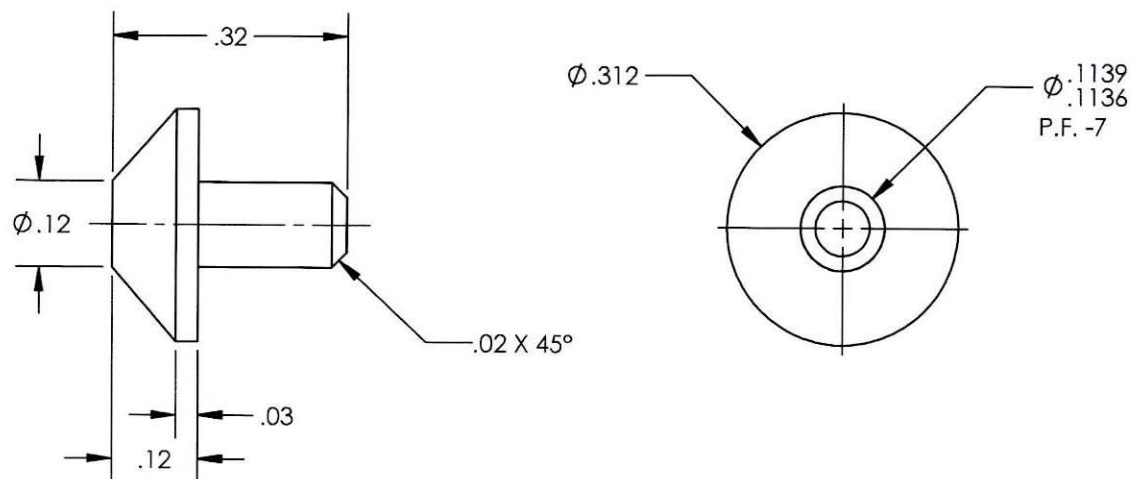
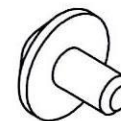
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified	☐	Past Due	☐				

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED



SHOP COPY
RETURN TO
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UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 172218

MLJ

18-02-14

(-9)
ALIGNMENT TIP

DART AEROSPACE	
TITLE POSITIONER	
DWG NO. RBE117-41601W1-9	REV 1
MAT'L 4140/4142	UNLESS OTHERWISE SPECIFIED
HEAT TREAT RC 28-32	DIMENSIONS ARE IN INCHES
FINISH ZINC PLATE	.XXX $\pm$.005 FRACTIONS $\pm$ 1/8
SPEC ASTM B633 TYPE I SC 2	.XX $\pm$.01 ANGLES $\pm$ 5°
DRAWN BY: DUERFELDT	.X $\pm$.1 SURFACES = 125/✓
CHECKED: CLOUGH	1. BREAK ALL SHARP EDGES
OPPS APPR: ANDERSON	.015 x 45° OR .015R
QA APPR: LINDSAY	2. DIMENSIONAL LIMITS APPLY
APPROVED: GILBERT	AFTER PLATING
	3. INTERPRET DIM AND TOL PER
	ASME Y14.5M-2009
	USED ON MODEL
	H145
SCALE 4:1	DATE 7/21/2016
	SHEET 6 OF 6



Work Order update only

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. _____		Rework ☐		Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐		
NCR No. _____		Scrap ☐		Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐		
		Use-as-is ☐		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐		
		Suspected Unapproved ☐		Large Fab ☐	Composite ☐	Supplier ☐			
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition			Completed By		
							Lead hand / Supervisor Approval Verification		
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Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
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Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								